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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/650,351	08/29/2000	Makoto Sato	450100-02667	8239

20999 7590 11/14/2003  
FROMMER LAWRENCE & HAUG  
745 FIFTH AVENUE- 10TH FL.  
NEW YORK, NY 10151

EXAMINER

JUNG, MIN

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 11/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

DOCKETED

NOV 17 A 9:58  
FROMMER LAWRENCE  
& HAUG, LLP

## Office Action Summary

Application No.

09/650,351

Applicant(s)

SATO ET AL.

Examiner

Min Jung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 7, line 3, it is not clear what is meant by "the actual number of connection". Does it mean the actual number of hops, the number of segments, the number of circuit connections, the number of nodes, or something else?

In claims 4 and 10, line 4, it is not clear what is meant by "a physical delay of a node". Does it mean a transmission delay experienced by a packet while traversing a node, or some other kind of delay?

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5-9, and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Cook et al., US 5,687,319 (Cook).

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Cook discloses a method and system for determining maximum cable segments between all possible node to node paths on a serial bus. Specifically, Cook teaches communicating information between a number of nodes connected to an IEEE 1394 serial bus, comprising the steps of : acquiring a value corresponding to the actual number of connections of the nodes connected to the bus (col. 1, lines 41-47, col. 2, lines 56-59, and col. 8, lines 36-39); and establishing predetermined communication parameters as a function of the acquired value (col. 2, lines 39-41, and lines 50-53, and col. 8, lines 52-54).

Cook further teaches that the maximum number of cable segments is determined so as to minimize the interpacket transmission gap time. See col. 1, lines 41-47, and col. 2, lines 56-59. This teaching is directly related to efficient bandwidth usage, and therefore, implies the bandwidth allocation in relation to the gap time designation. See also col. 2, lines 39-42, for the relationship between gap time and optimum bus performance.

Cook further teaches the node identification increasing sequentially, with a root node exhibiting a node identification of the highest value, and the actual number of connections of the nodes being represented by the node identification of the root node. See col. 2, lines 20-25, and col. 6, lines 45-46.

In Cook's teaching, it is inherent that the communication is asynchronous wherein data packets are time division multiplexed as a function of the predetermined communication parameters. See col. 2, lines 39-53. Cook teaches communicating

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isochronous packets and asynchronous packets, and teaches the four different kinds of required gaps.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook.

Cook fails to specifically teach the calculation of propagation time as a function of the actual number of connections of the nodes and the length of a transmission path, and calculating an arbitration time as a function of the calculated propagation time and time needed by a node to effect calculations. However, Cook teaches that the default timing set is adequate for 16 cable hops, each of 4.5 meters for a total of 72 meters. By this teaching, it is known that Cook recognizes the standard operation with the maximum gap time. Cook obtains the actual number of hops (segments) for an optimum performance. Cook also teaches the arbitration time. See col. 2, lines 48-50. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to calculate the propagation time, etc. to calculate the arbitration time needed.

***Conclusion***

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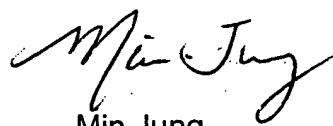
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Park et al. patent, 6,556,543, the LaFollette et al. patent, 6,212,171, the Hattig patent, 6,466,549, and the Okuyama et al. patent, 6,529,951, are cited for further teachings.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Min Jung whose telephone number is 703-305-4363. The examiner can normally be reached on Monday-Friday, 7AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

MJ  
November 12, 2003

  
Min Jung  
Primary Examiner